

State Water Resources Control Board

Division of Drinking Water

February 16, 2018

System No. 4410301

Rachel Arias
Mountains Sector Maintenance Chief II
California State Park – Big Basin
303 Big Trees Park Rd.
Felton, CA 95018

**AMENDMENT 001 TO COMPLIANCE ORDER NO. 02_05_15R_005
TOTAL TRIHALOMETHANE MAXIMUM CONTAMINANT LEVEL EXCEEDANCE
TITLE 22, CALIFORNIA CODE OF REGULATIONS, SECTION 64533 (a)
CALIFORNIA STATE PARKS - BIG BASIN, WATER SYSTEM NO. 4410301**

Enclosed is Amendment 001 to Compliance Order issued to the California State Park - Big Basin (CSP Big Basin) water system on November 16, 2015. Amendment 001 includes language and revised deadlines to be added to or replace text in the Compliance Order as specified.

California State Park - Big Basin will be billed at the State Water Resources Control Board's (hereinafter "State Water Board") hourly rate for the time spent on issuing this Compliance Order. California Health and Safety Code (hereinafter "CHSC"), Section 116577, provides that a public water system must reimburse the State Water Board for actual costs incurred by the State Water Board for specified enforcement actions, including but not limited to, preparing, issuing and monitoring compliance with a compliance order. At this time, the State Water Board has spent approximately two hours on enforcement activities associated with this violation.

CSP Big Basin will receive a bill sent from the State Water Board in August of the next fiscal year. This bill will contain fees for any enforcement time spent on CSP Big Basin for the current fiscal year.

Any person who is aggrieved by a citation, order or decision issued by the Deputy Director of the Division of Drinking Water under Article 8 (commencing with CHSC, Section 116625) or Article 9 (commencing with CHSC, Section 116650), of the Safe Drinking Water Act (CHSC, Division 104, Part 12, Chapter 4), may file a petition with the State Water Board for reconsideration of the citation, order or decision. Appendix 1 to the enclosed Order contains the relevant statutory provisions for filing a petition for reconsideration (CHSC, Section 116701).

Petitions must be received by the State Water Board within 30 days of the issuance of the citation, order or decision by the Deputy Director. The date of issuance is the date when the Division of Drinking Water

mails a copy of the citation, order or decision. If the 30th day falls on a Saturday, Sunday, or state holiday, the petition is due the following business day by 5:00 p.m.

Information regarding filing petitions may be found at:

http://www.waterboards.ca.gov/drinking_water/programs/petitions/index.shtml

If you have any questions regarding this matter, please contact Jonathan Weininger of my staff at (831) 655-6932 or me at (831) 655-6934.

Sincerely,



Jan R. Sweigert, P.E.
District Engineer, Monterey District Office
Northern California Field Operations Branch
Division of Drinking Water

Enclosures

Certified Mail No. 7008-1830-0004-5435-3272

cc: Email CSP Big Basin: Rachel Arias, Rachel.Arias@parks.ca.gov
Julie Holt, Julie.Holt@parks.ca.gov

Santa Cruz County Environmental Health Department (email)

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER

Name of Public Water System: California State Parks - Big Basin

Water System No: 4410301

To: Ms. Rachel Arias
MS Maintenance Chief, II
CSP Big Basin
303 Big Trees Park Rd.
Felton, CA 95018

Issued: February 16, 2018

**AMENDMENT 001 TO COMPLIANCE ORDER 02_05_15R_005
FOR VIOLATION OF HEALTH AND SAFETY CODE SECTION 116555(a)(1) AND
TITLE 22, CALIFORNIA CODE OF REGULATIONS, SECTION 64533(a)
THE PRIMARY DRINKING WATER STANDARDS FOR
TOTAL TRIHALOMETHANES AND HALOACETIC ACIDS FIVE**

The California Health and Safety Code (hereinafter "CHSC"), Section 116655 authorizes the State Water Resources Control Board (hereinafter "State Water Board") to issue a compliance order to a public water system when the State Water Board determines that the public water system has violated or is violating the California Safe Drinking Water Act (hereinafter "California SDWA"), (CHSC, Division 104, Part 12, Chapter 4, commencing

1 with Section 116270), or any regulation, standard, permit, or order issued or adopted
2 thereunder.

3
4 The State Water Board, acting by and through its Division of Drinking Water (hereinafter
5 "Division") and the Deputy Director for the Division, hereby issues Amendment 001 to
6 Compliance Order No. 02_05_15R_005 (hereinafter "Order") pursuant to Section 116655
7 of the CHSC to the California State Park - Big Basin (hereinafter "CSP Big Basin") for
8 violation of California Code of Regulations (hereinafter "CCR"), Title 22, Section 64533(a),
9 which was issued on July 3, 2015.

10
11 A copy of the applicable statutes and regulations are included in Appendix 1, which is
12 attached hereto and incorporated by reference.

13
14 This Amendment 001 to Compliance Order No. 02-05-15R-005 amends and supplements
15 Compliance Order No. 02-05-15R-005 as follows:

16
17 A) The following is added as the final paragraphs to the Section entitled "Statement of
18 Facts":

19
20 "On January 1, 2018, CSP Big Basin submitted a letter to the Division confirming the
21 compliance deadlines of directives in the Compliance Order No. 02-05-15R-005 will
22 not be met.

23
24 As of the date of Amendment 001 to this Compliance Order, CSP Big Basin has
25 failed to come into compliance with the CHSC, Sections 116555(a)(3), which
26 requires that any person who owns a public water system shall ensure that the
27 system provides a reliable and adequate supply of pure, wholesome, healthful, and
28 potable water by continuing to violate the Total Trihalomethanes and Haloacetic
29 Acids Five maximum contaminant levels (MCLs) specified in CCR, Title 22, Section
30 64533(a) at both distribution system monitoring locations.

B) The following is added as a final paragraph to the Section entitled "Determinations" to read:

"As of the date of Amendment 001 to this Compliance Order, the Division has determined that CSP Big Basin failed to comply with Directive 1 of Compliance Order No. 02-05-15R-005."

C) The following replaces Directive 1 of the section entitled "Directives":

"1. On or before **December 31, 2018**, complete all mitigation action items listed in the previously approved Compliance Action Plan (last updated January 10, 2018 and attached for reference). No later than **December 31, 2019**, comply with CCR, Title 22, Section 64533(a), specifically the Total Trihalomethanes and Haloacetic Acids Five MCLs at both approved distribution system monitoring locations. Compliance with Total Trihalomethanes and Haloacetic Acids Five MCLs shall be determined with the four quarter locational running annual average concentrations.

D) The following replaces Directive 5 of the Section entitled "Directives":

"5. On or before **March 25, 2018** submit a revised Corrective Action Plan that includes a time schedule with specific dates for completion of each of the phases of the projects identified in the January 10, 2018 Corrective Action Plan with final completion dates of all projects no later than December 31, 2018. The revised Corrective Action Plan shall include implementation dates of disinfection byproduct precursor treatment and operational strategies including system flushing, storage tank management, and raw water reservoir/surface water inlet management.

All submittals required by this Order shall be electronically submitted to the State Water Board at the following address. The subject line for all electronic submittals

corresponding to this Order shall include the following information: Water System name and number, order number and title of the document being submitted.

Jan Sweigert, P.E.
District Engineer, Monterey District Office
Dwpdist05@waterboards.ca.gov

The State Water Board reserves the right to make such modifications to this Order as it may deem necessary to protect public health and safety. Such modifications may be issued as amendments to this Order and shall be effective upon issuance.

Nothing in this Order relieves CSP Big Basin of its obligation to meet the requirements of the California SDWA (CHSC, Division 104, Part 12, Chapter 4, commencing with Section 116270), or any regulation, standard, permit or order issued or adopted thereunder.

PARTIES BOUND

This Order shall apply to and be binding upon CSP Big Basin, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The directives of this Order are severable, and CSP Big Basin shall comply with each and every provision thereof notwithstanding the effectiveness of any provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the State Water Board to: issue a citation or order with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. The California SDWA also

1 authorizes the State Water Board to take action to suspend or revoke a permit that has
2 been issued to a public water system if the public water system has violated applicable
3 law or regulations or has failed to comply with an order of the State Water Board, and to
4 petition the superior court to take various enforcement measures against a public water
5 system that has failed to comply with an order of the State Water Board. The State Water
6 Board does not waive any further enforcement action by issuance of this Compliance
7 Order.

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11 Stefan Cajina, P.E., Chief
12 North Coastal Section
13 State Water Resources Control Board
14 Division of Drinking Water
15

2/16/2018

Date



16 Appendix:

- 17
18 1. Applicable Statutes and Regulations
19

20 Certified Mail No. 7008-1830-0004-5435-3272

APPENDIX 1. APPLICABLE STATUTES AND REGULATIONS

For Amendment 001 to Compliance Order No. 02_05_15R_005

NOTE: The following language is provided for the convenience of the recipient, and cannot be relied upon as the State of California's representation of the law. The published codes are the only official representation of the law. Statutes related to drinking water are in the Health & Safety Code, the Water Code, and other codes.

California Health and Safety Code (CHSC):

Section 116271 (Transition of CDPH duties to State Water Board) states in relevant part:

(a) The State Water Resources Control Board succeeds to and is vested with all of the authority, duties, powers, purposes, functions, responsibilities, and jurisdiction of the State Department of Public Health, its predecessors, and its director for purposes of all of the following:

- (1) The Environmental Laboratory Accreditation Act (Article 3 (commencing with Section 100825) of Chapter 4 of Part 1 of Division 101).
- (2) Article 3 (commencing with Section 106875) of Chapter 4 of Part 1.
- (3) Article 1 (commencing with Section 115825) of Chapter 5 of Part 10.
- (4) This chapter and the Safe Drinking Water State Revolving Fund Law of 1997 (Chapter 4.5 (commencing with Section 116760)).
- (5) Article 2 (commencing with Section 116800), Article 3 (commencing with Section 116825), and Article 4 (commencing with Section 116875) of Chapter 5.
- (6) Chapter 7 (commencing with Section 116975).
- (7) The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Division 43 (commencing with Section 75001) of the Public Resources Code).
- (8) The Water Recycling Law (Chapter 7 (commencing with Section 13500) of Division 7 of the Water Code).
- (9) Chapter 7.3 (commencing with Section 13560) of Division 7 of the Water Code.
- (10) The California Safe Drinking Water Bond Law of 1976 (Chapter 10.5 (commencing with Section 13850) of Division 7 of the Water Code).
- (11) Wholesale Regional Water System Security and Reliability Act (Division 20.5 (commencing with Section 73500) of the Water Code).
- (12) Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Division 26.5 (commencing with Section 79500) of the Water Code).

(b) The State Water Resources Control Board shall maintain a drinking water program and carry out the duties, responsibilities, and functions described in this section. Statutory reference to "department," "state department," or "director" regarding a function transferred to the State Water Resources Control Board shall refer to the State Water Resources Control Board. This section does not impair the authority of a local health officer to enforce this chapter or a county's election not to enforce this chapter, as provided in Section 116500...

(k)

- (1) The State Water Resources Control Board shall appoint a deputy director who reports to the executive director to oversee the issuance and enforcement of public water system permits and other duties as appropriate. The deputy director shall have public health expertise.
- (2) The deputy director is delegated the State Water Resources Control Board's authority to provide notice, approve notice content, approve emergency notification plans, and take other action pursuant to Article 5 (commencing with Section 116450), to issue, renew, reissue, revise, amend, or deny any public water system permits pursuant to Article 7 (commencing with Section 116525), to suspend or revoke any public water system permit pursuant to Article 8 (commencing with Section 116625), and to issue citations, assess penalties, or issue orders pursuant to Article 9 (commencing with Section 116650). Decisions and actions of the deputy director taken pursuant to Article 5 (commencing with Section 116450) or Article 7 (commencing with Section 116525) are deemed decisions and actions taken, but are not subject to reconsideration, by the State Water Resources Control Board. Decisions and actions of the deputy director taken pursuant to Article 8 (commencing with Section 116625) and Article 9 (commencing with Section 116650) are deemed decisions and actions taken by the State Water Resources Control Board, but any aggrieved person may petition the State Water Resources Control Board for reconsideration of the decision or action. This subdivision is not a limitation on the State Water Resources Control Board's authority to delegate any other powers and duties.

Section 116625 (Revocation and suspension of permits) states:

(a) The department, after a hearing noticed and conducted as provided in Section 100171, may suspend or revoke any permit issued pursuant to this chapter if the department determines pursuant to the hearing that the permittee is not complying with the permit, this chapter, or any regulation, standard, or order issued or adopted thereunder, or that the permittee has made a false statement or representation on any application, record, or report maintained or submitted for purposes of compliance with this chapter. If the permit at issue has been temporarily suspended pursuant to subdivision (c), the accusation shall be served and notice of the hearing date given within 15 days of the effective date of the temporary suspension order. The commencement of the hearing shall be as soon as practicable, but in no case later than 60 days after the effective date of the temporary suspension order.

(b) The permittee may file with the superior court a petition for a writ of mandate for review of any decision of the department made pursuant to subdivision (a). Failure to file a petition shall not preclude a party from challenging the reasonableness or validity of a decision of the department in any judicial proceeding to enforce the decision or from pursuing any remedy authorized by this chapter.

(c) The department may temporarily suspend any permit issued pursuant to this chapter prior to any hearing when the action is necessary to prevent an imminent or substantial danger to health. The director shall notify the permittee of the temporary suspension and the effective date thereof and, at the same time, notify the permittee that a hearing has been scheduled. The hearing shall be held as soon as possible, but not later than 15 days after the effective date of the temporary suspension and shall deal only with the issue of whether the temporary suspension shall remain in place pending a hearing on the merits. The temporary suspension shall remain in effect until the hearing is completed and the director has made a final determination on the temporary suspension, that in any event shall be made within 15 days after the completion of the hearing. If the determination is not transmitted within 15 days after the hearing is completed, the temporary suspension shall be of no further effect. Dissolution of the temporary suspension does not deprive the department of jurisdiction to proceed with a hearing on the merits under subdivision (a).

Section 116555 (Operational Requirements) states in relevant part:

(a) Any person who owns a public water system shall ensure that the system does all of the following:

- (1) Complies with primary and secondary drinking water standards.
- (2) Will not be subject to backflow under normal operating conditions.
- (3) Provides a reliable and adequate supply of pure, wholesome, healthful, and potable water.

Section 116655 (Orders) states:

(a) Whenever the State Water Board determines that any person has violated or is violating this chapter, or any order, permit, regulation, or standard issued or adopted pursuant to this chapter, the State Water Board may issue an order doing any of the following:

- (1) Directing compliance forthwith.
- (2) Directing compliance in accordance with a time schedule set by the State Water Board.
- (3) Directing that appropriate preventive action be taken in the case of a threatened violation.

(b) An order issued pursuant to this section may include, but shall not be limited to, any or all of the following requirements:

- (1) That the existing plant, works, or system be repaired, altered, or added to.
- (2) That purification or treatment works be installed.
- (3) That the source of the water supply be changed.
- (4) That no additional service connection be made to the system.
- (5) That the water supply, the plant, or the system be monitored.
- (6) That a report on the condition and operation of the plant, works, system, or water supply be submitted to the State Water Board.

Section 116701 (Petitions to Orders and Decisions) states:

(a) Within 30 days of issuance of an order or decision issued by the deputy director under Article 8 (commencing with Section 116625) or Article 9 (commencing with Section 116650), an aggrieved person may petition the state board for reconsideration. Where the order or decision of the deputy director is issued after a hearing under Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code, this section shall apply instead of Section 11521 of the Government Code.

(b) The petition shall include the name and address of the petitioner, a copy of the order or decision for which the petitioner seeks reconsideration, identification of the reason the petitioner alleges the issuance of the order was inappropriate or improper, the specific action the petitioner requests, and other information as the state board may prescribe. The petition shall be accompanied by a statement of points and authorities of the legal issues raised by the petition.

(c) The evidence before the state board shall consist of the record before the deputy director and any other relevant evidence that, in the judgment of the state board, should be considered to implement the policies of this chapter. The state board may, in its discretion, hold a hearing for receipt of additional evidence.

(d) The state board may refuse to reconsider the order or decision if the petition fails to raise substantial issues that are appropriate for review, may deny the petition upon a determination that the issuance of the order or decision was appropriate and proper, may set aside or modify the order or decision, or take other appropriate action. The state board's action pursuant to this subdivision shall constitute the state board's completion of its reconsideration.

- (e) The state board, upon notice and hearing, if a hearing is held, may stay in whole or in part the effect of the order or decision of the deputy director.
- (f) If an order of the deputy director is subject to reconsideration under this section, the filing of a petition for reconsideration is an administrative remedy that must be exhausted before filing a petition for writ of mandate under Section 116625 or 116700.

California Code of Regulations, Title 22 (CCR):

§64530. Applicability of Chapter 15.5 (Disinfection Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors.

(a) Community water systems and nontransient noncommunity water systems that treat their water with a chemical disinfectant in any part of the treatment process or which provide water that contains a chemical disinfectant shall comply with the requirements of this chapter beginning on the dates specified in paragraphs (1) or (2), except as provided for in subsections (c) and (d).

(1) Systems using approved surface water and serving 10,000 or more persons shall comply beginning January 1, 2002.

(2) Systems using approved surface water and serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water shall comply beginning January 1, 2004.

(b) Transient noncommunity water systems using chlorine dioxide shall comply with the requirements for chlorine dioxide in this chapter beginning on the dates specified in paragraphs (1) or (2).

(1) Systems using approved surface water and serving 10,000 or more persons shall comply beginning January 1, 2002.

(2) Systems using approved surface water and serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water shall comply beginning January 1, 2004.

(c) Community water systems, and nontransient noncommunity water systems serving at least 10,000 persons, using a primary or residual disinfectant other than ultraviolet light or delivering water that has been treated with a primary or residual disinfectant other than ultraviolet light shall comply with the Individual Distribution System Evaluation (IDSE) requirements of 40 Code of Federal Regulations, parts 141.600 and either 141.601 and 141.605, 141.602 and 141.605, 141.603, or 141.604 (71 Fed. Reg. 388 (January 4, 2006); as amended at 74 Fed. Reg. 30953 (June 29, 2009)), which are incorporated by reference.

(d) Community water systems and nontransient noncommunity water systems using a primary or residual disinfectant other than ultraviolet light or delivering water that has been treated with a primary or residual disinfectant other than ultraviolet light shall:

(1) Comply with the applicable TTHM and HAA5 compliance date in table 64530-A;

Table 64530-A: TTHM and HAA5 Compliance Dates

Systems of this type... Shall comply with TTHM and HAA5 monitoring pursuant to section 64534.2(d) by...

(a) Systems that are not part of a combined distribution system and systems that serve the largest population in the combined distribution system and serving a population of...	(1) $\geq 100,000$	April 1, 2012
	(2) 50,000 – 99,999	October 1, 2012
	(3) 10,000 – 49,999	October 1, 2013
	(4) $< 10,000$	October 1, 2013, if no <i>Cryptosporidium</i> monitoring is required pursuant to 40 Code of Federal Regulations part 141.701(a)(4) (71 Fed. Reg. 654 (January 5, 2006)), which is incorporated by reference; or October 1, 2014, if <i>Cryptosporidium</i> monitoring is required pursuant to 40 Code of Federal Regulations part 141.701(a)(4) or (a)(6) (71 Fed. Reg. 654 (January 5, 2006)), which are incorporated by reference.
(b) Other consecutive or wholesale systems that are part of a combined distribution system	At the same time as the system with the earliest compliance date in the combined distribution system.	

(2) Systems required to conduct quarterly monitoring for TTHM and HAA5 pursuant to section 64534.2(d) shall:

- (A) Begin monitoring in the first full calendar quarter that includes the compliance date in table 64530-A; and
- (B) Make compliance calculations at the end of the fourth calendar quarter that follows the compliance date in table 64530-A and at the end of each subsequent quarter (or earlier if the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters).
- (3) Systems required to conduct monitoring at a frequency that is less than quarterly shall:
- (A) No later than 12 months after the compliance date in table 64530-A, begin monitoring in the calendar month recommended in the IDSE report prepared pursuant to section 64530(c) or the calendar month identified in the monitoring plan developed pursuant to section 64534.8; and
- (B) Make compliance calculations beginning with the first compliance sample taken after the compliance date in table 64530-A.

§64533. Maximum Contaminant Levels for Disinfection Byproducts.

(a) Using the monitoring and calculation methods specified in sections 64534, 64534.2, 64535, and 64535.2, the primary MCLs for the disinfection byproducts shown in table 64533-A shall not be exceeded in drinking water supplied to the public.

Table 64533-A

Maximum Contaminant Levels and Detection Limits for Purposes of Reporting Disinfection Byproducts

Disinfection Byproduct	Maximum Contaminant Level (mg/L)	Detection Limit for Purposes of Reporting (mg/L)
Total trihalomethanes (TTHM)	0.080	
Bromodichloromethane		0.0010
Bromoform		0.0010
Chloroform		0.0010
Dibromochloromethane		0.0010
Haloacetic acids (five) (HAA5)	0.060	
Monochloroacetic Acid		0.0020
Dichloroacetic Acid		0.0010
Trichloroacetic Acid		0.0010
Monobromoacetic Acid		0.0010
Dibromoacetic Acid		0.0010
Bromate	0.010	0.0050 0.0010 ¹
Chlorite	1.0	0.020

¹ For analysis performed using EPA Method 317.0 Revision 2.0, 321.8, or 326.0

§64534.2 (Disinfection Byproducts Monitoring) (d) states:

By the applicable date specified in section 64530(d), and in lieu of TTHM and HAA5 monitoring in subsection (a):

- (1) Community and nontransient noncommunity water systems shall monitor for TTHM and HAA5 at the frequencies and location totals indicated in table 64534.2-C and in accordance with the monitoring plan developed pursuant to section 64534.8;

Table 64534.2-C

Routine Monitoring Frequency for TTHM and HAA5

Source water type	Persons served	Minimum monitoring frequency ¹	
		Number of distribution system monitoring locations	Monitoring period ²
Systems using approved surface water	≥5,000,000	20 dual sample sets	per quarter
	1,000,000 – 4,999,999	16 dual sample sets	per quarter
	250,000 – 999,999	12 dual sample sets	per quarter
	50,000 – 249,999	8 dual sample sets	per quarter
	10,000 – 49,999	4 dual sample sets	per quarter
	3,301 – 9,999	2 dual sample sets	per quarter

	500 – 3,300	1 TTHM and 1 HAA5 sample: one at the location with the highest TTHM measurement, one at the location with the highest HAA5 measurement	per quarter
	<500	1 TTHM and 1 HAA5 sample: one at the location with the highest TTHM measurement, one at the location with the highest HAA5 measurement ³	per year
Systems using ground water not under direct influence of surface water	≥500,000	8 dual sample sets	per quarter
	100,000 – 499,999	6 dual sample sets	per quarter
	10,000 – 99,999	4 dual sample sets	per quarter
	500 – 9,999	2 dual sample sets	per year
	<500	1 TTHM and 1 HAA5 sample: one at the location with the highest TTHM measurement, one at the location with the highest HAA5 measurement ³	per year

¹ All systems shall monitor during the month of highest disinfection byproduct concentrations.

² Systems on quarterly monitoring shall take dual sample sets every 90 days at each monitoring location, except for systems using approved surface water and serving 500 – 3,300 persons.

³ Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location and month.

Section 64535.2 (Compliance Requirements) (e) states:

TTHM and HAA5 MCL compliance, as monitored pursuant to section 64534.2(d), shall be determined as follows:

- (1) For systems monitoring quarterly, each locational running annual average (LRAA), computed quarterly, shall not exceed the MCLs specified in section 64533;
- (2) For systems monitoring annually or less frequently, each sample collected shall not exceed the MCLs specified in section 64533. If no sample exceeds the MCL, the sample result for each monitoring location shall be considered the LRAA for the monitoring location. If any sample exceeds the MCL, systems shall increase monitoring pursuant to section 64534.2(d)(5). Compliance with the MCL shall then be determined by the average of the sample that triggered the quarterly monitoring and the following three quarters of monitoring, unless the result of fewer than four quarters of monitoring will cause the LRAA to exceed the MCL, in which case the system is in violation immediately. After monitoring quarterly for four consecutive quarters (including the quarter that triggered the quarterly monitoring), and until such time as monitoring returns to routine monitoring pursuant to section 64534.2(d)(5), compliance shall be determined pursuant to paragraph (1);
- (3) If a system fails to complete four consecutive quarters of monitoring, compliance with the MCL for the last four-quarter compliance period shall be based on an average of the available data. If more than one sample per quarter is taken at a monitoring location, all the samples taken in the quarter at that monitoring location shall be averaged to determine a quarterly average to be used in the LRAA calculation; and
- (4) If the LRAA exceeds the MCL, calculated based on four consecutive quarters of monitoring (or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters), the system is in violation of the MCL and shall notify the public pursuant to sections 64463, 64463.4, and 64465, including the language in appendix 64465-G, in addition to reporting to the State Board pursuant to sections 64537 through 64537.6.

Section 64463.4 (Tier 2 Public Notice) states:

(a) A water system shall give public notice pursuant to this section if any of the following occurs:

- (1) Any violation of the MCL, MRDL, and treatment technique requirements, except:
 - (A) Where a Tier 1 public notice is required under section 64463.1; or
 - (B) Where the State Board determines that a Tier 1 public notice is required, based on potential health impacts and persistence of the violations;
- (2) All violations of the monitoring and testing procedure requirements in sections 64421 through 64426.1, article 3 (Primary Standards – Bacteriological Quality), for which the State Board determines that a Tier 2

- rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations;
- (3) Other violations of the monitoring and testing procedure requirements in this chapter, and chapters 15.5, 17 and 17.5, for which the State Board determines that a Tier 2 rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations; or
 - (4) Failure to comply with the terms and conditions of any variance or exemption in place.
- (b) A water system shall give the notice as soon as possible within 30 days after it learns of a violation or occurrence specified in subsection (a), except that the water system may request an extension of up to 60 days for providing the notice. This extension would be subject to the State Board's written approval based on the violation or occurrence having been resolved and the State Board's determination that public health and welfare would in no way be adversely affected. In addition, the water system shall:
- (1) Maintain posted notices in place for as long as the violation or occurrence continues, but in no case less than seven days;
 - (2) Repeat the notice every three months as long as the violation or occurrence continues. Subject to the State Board's written approval based on its determination that public health would in no way be adversely affected, the water system may be allowed to notice less frequently but in no case less than once per year. No allowance for reduced frequency of notice shall be given in the case of a total coliform MCL violation or violation of a Chapter 17 treatment technique requirement; and
 - (3) For turbidity violations pursuant to sections 64652.5(c)(2) and 64653(c), (d) and (f), as applicable, a water system shall consult with the State Board as soon as possible within 24 hours after the water system learns of the violation to determine whether a Tier 1 public notice is required. If consultation does not take place within 24 hours, the water system shall give Tier 1 public notice within 48 hours after learning of the violation.
- (c) A water system shall deliver the notice, in a manner designed to reach persons served, within the required time period as follows:
- (1) Unless otherwise directed by the State Board in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, community water systems shall give public notice by:
 - (A) Mail or direct delivery to each customer receiving a bill including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners, or large private employers), and other service connections to which water is delivered by the water system; and
 - (B) Use of one or more of the following methods to reach persons not likely to be reached by a mailing or direct delivery (renters, university students, nursing home patients, prison inmates, etc.):
 1. Publication in a local newspaper;
 2. Posting in conspicuous public places served by the water system, or on the Internet; or
 3. Delivery to community organizations.
 - (2) Unless otherwise directed by the State Board in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, noncommunity water systems shall give the public notice by:
 - (A) Posting in conspicuous locations throughout the area served by the water system; and
 - (B) Using one or more of the following methods to reach persons not likely to be reached by a public posting:
 1. Publication in a local newspaper or newsletter distributed to customers;
 2. E-mail message to employees or students;
 3. Posting on the Internet or intranet; or
 4. Direct delivery to each customer.

Section 64465 (Public Notice Content and Format) states in relevant part:

- (a) Each public notice given pursuant to this article, except Tier 3 public notices for variances and exemptions pursuant to subsection (b), shall contain the following:
- (1) A description of the violation or occurrence, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
 - (2) The date(s) of the violation or occurrence;
 - (3) Any potential adverse health effects from the violation or occurrence, including the appropriate standard health effects language from appendices 64465-A through G;
 - (4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in drinking water;
 - (5) Whether alternative water supplies should be used;
 - (6) What actions consumers should take, including when they should seek medical help, if known;
 - (7) What the water system is doing to correct the violation or occurrence;
 - (8) When the water system expects to return to compliance or resolve the occurrence;
 - (9) The name, business address, and phone number of the water system owner, operator, or designee of the water system as a source of additional information concerning the public notice;
 - (10) A statement to encourage the public notice recipient to distribute the public notice to other persons served, using the following standard language: —Please share this information with all the other people who drink this water, especially those who may not have received this public notice

directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail; and (11) For a water system with a monitoring and testing procedure violation, this language shall be included: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period dates], we ['did not monitor or test' or 'did not complete all monitoring or testing'] for [contaminant(s)], and therefore, cannot be sure of the quality of your drinking water during that time." ...

(c) A public water system providing notice pursuant to this article shall comply with the following multilingual-related requirements:

(2) For a Tier 2 or Tier 3 public notice:

(A) The notice shall contain information in Spanish regarding the importance of the notice, or contain a telephone number or address where Spanish-speaking residents may contact the public water system to obtain a translated copy of the notice or assistance in Spanish; and

(B) When a non-English speaking group other than Spanish-speaking exceeds 1,000 residents or 10 percent of the residents served by the public water system, the notice shall include:

1. Information in the appropriate language(s) regarding the importance of the notice; or
2. A telephone number or address where such residents may contact the public water system to obtain a translated copy of the notice or assistance in the appropriate language; and

(3) For a public water system subject to the Dymally-Alatorre Bilingual Services Act, Chapter 17.5, Division 7, of the Government Code (commencing with section 7290), meeting the requirements of this Article may not ensure compliance with the Dymally-Alatorre Bilingual Services Act.

(d) Each public notice given pursuant to this article shall:

- (1) Be displayed such that it catches people's attention when printed or posted and be formatted in such a way that the message in the public notice can be understood at the eighth-grade level;
- (2) Not contain technical language beyond an eighth-grade level or print smaller than 12 point; and
- (3) Not contain language that minimizes or contradicts the information being given in the public notice.

Appendix 64465-G (Health Effects Language – Disinfection Byproducts, Byproduct Precursors, and Disinfectant Residuals) states in relevant part:

Contaminant	Health Effects Language
TTHMs [Total Trihalomethanes]:	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
Haloacetic Acids	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Section 64469 (Reporting Requirements) states in relevant part:

(d) Within 10 days of giving initial or repeat public notice pursuant to Article 18 of this Chapter, except for notice given under section 64463.7(d), each water system shall submit a certification to the State Board that it has done so, along with a representative copy of each type of public notice given.

Section 64481 (Content of the Consumer Confidence Report) states in relevant part:

(d) For contaminants identified in subsection (c), the water system shall include in the Consumer Confidence Report one table or several adjacent tables that have been developed pursuant to this subsection. Any additional monitoring results that a water system chooses to include in its Consumer Confidence Report shall be displayed separately.

(3) The table(s) shall clearly identify any data indicating violations of MCLs, regulatory action levels, MRDLs, or treatment techniques and the Consumer Confidence Report shall give information on each violation including the length of the violation, potential adverse health effects (PDWS only), and actions taken by the system to address the violation. To describe the potential health effects, the system shall use the relevant language pursuant to appendices 64465-A through H;

APPENDIX 2. CSP BIG BASIN'S JANUARY 10, 2018 CORRECTIVE ACTION PLAN



DEPARTMENT OF PARKS AND RECREATION

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January 10, 2018

California Department of Public Health
Drinking Water Field Operations Branch
1 Lower Ragsdale, Building 1, Suite 120
Monterey, CA 93940
Voice: (831) 655-6939
Fax: (831) 655-6944
Attn: Jan Sweigert, District Engineer
Monterey District
Drinking Water Field Operations Branch

Re: CSP- BIG BASIN, System No. 4410301 TTHM CORRECTIVE ACTION PLAN UPDATE

As directed per the State Water Resources - Division of Drinking (DDW) document titled "Review of TTHM Compliance Action Plan for California State Parks - Big Basin (System No.4410301)", and in regards to Compliance Order 02_05_15R_005_4410301_02, we are providing the following quarterly update.

Task:

- Installation of temporary clear well tank and plumbing to distribution system, and construction of new 50K stainless steel clear well tank
 - April 13th job showing
 - April 27th bid opening
 - May 1, 2016 Notice to proceed
 - September 16, 2016 (contractor can begin erecting temp tank system; MM constraint)
 - October 15, 2016 Demo existing tank
 - December 7, 2016 Tank Pad Concrete Pad Complete
 - January 2017 Tank Erection
 - **May 25, 2017 Tank construction complete and on line**

- Installation of coagulant feed system upstream of microfiltration plant (**pending DDW approval**)
 - June 23, 2016 funding secured
 - July 5, 2016 request to Sacramento to work with Northern Service Center to start the Coagulant Pilot Testing under Fall Creek Engineering's (FCE) Direction
 - February 8, 2017 FCE to begin Jar Testing
 - May 31, 2017 60% Plans for Coagulant (assuming DDW approval within 2 weeks)
 - June 30, 2017 95% Plans for Coagulant
 - September 2017-January 2018, The Coagulation study report has been completed and we have transitioned to our new consultant, with whom we are developing a scope for a work order to prepare a plan for pilot study and design.
NOTE: Because of the steep increase in estimated costs for coagulation pretreatment and since it could take up to two months to create the work order for the new engineering firm, with another month to complete their review of the FCE reports), we have opted to secure the services of a third party TTHM expert

(Carollo Engineers, Inc.) to review FCE's reports and confirm that coagulation is still the most efficient and cost effective treatment route to pursue.

Carollo's review began November 30, 2017, with their report due early January 2018.

On January 4, 2018, Carollo, State Parks and Coleman Engineering participated in a conference call to discuss Carollo's report (see Peer Review attachment). Based on this discussion State Parks will issue a work order to Coleman to conduct further lab testing and design treatment plant upgrades. Concurrently, State Parks will initiate Chloramination bench testing through an independent lab. Once complete, a report will be forwarded to DDW for review.

In the interim, State parks is creating a contract to provide bottled drinking water to all residents and employees until compliance is achieved

- Replacement carbon filter media and installation differential pressure gauges on inlet and outlet of carbon filter
 - Carbon replacement completed May 26, 2016, and again on August 30, 2017. The carbon type was the same as previously used as FCE recommendation not valid. Monitoring carbon life through TOC sampling - No need for pressure gauge installation.
- Relocation of chlorination equipment from gatehouse at Big Basin to downstream of tanks at Little Basin - on demand chlorination system
 - June 23, 2016 Funding secured for design of on-demand chlorination equipment installation.
 - March 16, 2017 FCE visits Little Basin to begin design of on demand chlorine injection system
 - May 31, 2017 Little Basin Chlorine Injection System plan complete
 - July 7, 2017 Preliminary plans have been reviewed/returned, and construction documents are being prepared.
 - September 2017 plans received from FCE for the on demand chlorination system at Little Basin and construction bid documents are being prepared.
 - **January 2018 90% Plans complete. This project is on hold pending results of treatment plant upgrades.**
- Development and implementation of water quality monitoring plan for distribution and source water (TTHM, DOC, UV absorbance, dissolved oxygen, pH, temperature, turbidity, and residual chlorine levels).
 - Began quarterly monitoring plan January 2017, paused sampling during temporary tank feed and clearwell replacement project construction. **Sampling resumed June 2017 and continues quarterly.**
- Complete Water Treatment Plant Operations Plan – to be done in-house
 - **In Process, to be completed by June 30, 2018**
- Complete Watershed Sanitary survey
 - **Funding and project request submitted to Sacramento**
 - **Waiting for a response from Sacramento for assistance**
 - **December 31, 2018 planning and implementation complete**
 - **In process, to be completed by June 30, 2018**

By December 31, 2017(through Northern Service Center) - Schedule to be determined

- Development of water management plan (to actively manage water throughout tanks and various zones in during high/low
- If TTHM formation is still occurring in water storage tanks:
 - Install circulation pumps/aeration systems in distribution tanks. May need to look at solar options if electrical is not available at site.
 - Investigate alternatives for supplying water to Little Basin and remove it from the Big Basin water system

Recommendations and improvements in place to date:

- Removal of tulles(cattails) from reservoir dam face
- Increased flushing activities throughout all zones of distribution system
- Single horizontal tank in use at Little Basin and maintaining 1/2 of its capacity to facilitate better turnover during off season
- Relocated inlets to opposite ends of both horizontal storage tanks at Little Basin
- Panoramic tank level lowered to maintain less than 1/3 of its capacity in off season to facilitate better turnover of water in off season
- Periodic monitoring of reservoir temperature, turbidity and dissolved oxygen to determine best water quality depth intake depth location
- New 50K stainless steel clearwell tank with water recirculation pump installed and in operation

Long term Improvements if above measures do not achieve adequate TTHM reduction:

- Install additional carbon filter and modify inlet to uniformly distribute water over surface of media
- Investigate feasibility of installing a smaller storage tank to supply Sky Meadow Residences or determine if redesign of existing tank piping would allow for upper tanks to directly serve all residences and maintain Sky meadow tank as fire reserve
- Develop Reservoir Management Plan-- Dredging, periodic inspection of inlet and drain, drain vent tube replacement, drain slide gate rehab, solar mixing/aeration, vegetation control around reservoir perimeter
- Install flow meters and shutoff at tanks and laterals into various campgrounds to monitor for use and leaks
- Replace aged distribution system (mains, laterals, fire hydrants, and various appurtenances)
- If TTHM's are not significantly reduced following the above modifications, an alternate form of disinfection may need explored as well as closer to point of use chlorine trimming systems

If there are any questions, I can be reached Monday through Friday 7:00am to 3:30pm.

Sincerely,

